



## About Our Steel

Pi Tape offers a variety of steel and finish options designed to compliment every application. The following (listed below) are benefits to consider prior to making your purchase.

- 1.- 1095 spring steel is unquestionably the finest steel available for precision diameter tapes where thermal expansion and minimum stretch under normal operating tension ranges are a primary consideration. Pi Tape has received spring steel tapes for recalibration service which were manufactured over 50 years ago and are still within our tolerance of 0,03 mm (0.001"). A light film coating of LPS3 oil is the only maintenance needed for these incredibly accurate instruments.
- 2.- Our 716 Stainless Steel, a specialty steel manufactured by Uddeholm, is utilized in more corrosive environments. Although stainless steel is a softer material with similar thermal expansion qualities as spring steel, it is used effectively in a multitude of industrial applications.
- 3.- Our blue easy to read utilizes 1095 spring steel and is an extremely durable instrument, often utilized in low light environments or highly reflective conditions.
- 4.- The white easy to read is manufactured using 1095 spring steel or, on special request, 716 stainless steel. These tapes are very popular and can also be used in low light applications. This instrument relies on a coating for the surface of the tape and should not be exposed to paints, solvents or corrosive work environments.

### Physical Properties of Steel - Pi Tape Texas, LLC

	1095 Spring Steel	716 Stainless Steel
Coefficient of Expansion per inch per degree F.	0.0000065	0.0000062
Elongation % in inches	7-10%	7-12%
Hardness	51 RC	49-53 RC
Tensile Strength PSI	259,600	248,000-277,000
Yield Strength PSI	235,690	210,000

### The relevant criteria regarding thermal qualities of steel

#### Comparing coefficient of thermal expansion

	Our Spring Steel:	Other materials on the market:	
	0.0000065"	0.0000092"	Différence
24" with 5°f temp variable	0.0007"	0.0011"	0.0004"
24" with 20°f temp variable	0.0030"	0.0044"	0.0014"
48" with 5°f temp variable	0.0015"	0.0022"	0.0007"
48" with 20°f temp variable	0.0060"	0.0088"	0.0028"